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Page 1 of:	24	
Attention:	MAIL STOP AF Group Art Unit 2618 Examiner: Andrew Wendell	Tel.: (613) 232-2486 Fax: (613) 232-8440
From:	SMART & BIGGAR	
Your file no.:	10/813,009	**Date:** March 28, 2008
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TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. 71493-1577/jas

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In Re Application Of: **FALCONER, David et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/813,009	March 31, 2004	WENDELL, Andrew	07380	2618	5255

Invention: **RELAYING SYSTEM AND METHOD WITH PARTNER RELAYS AND SELECTIVE TRANSMISSION**

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:
January 31, 2008

The fee for filing this Appeal Brief is: **$510.00**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS

In re application of:	
David Falconer et al.	
Serial No.: 10/813,009	Group Art Unit: 2618
Filed: March 31, 2004	Examiner: Andrew Wendell
For: RELAYING SYSTEM AND METHOD WITH PATNER RELAYS AND SELECTIVE TRANSMISSION	Attorney Docket: 71493-1577

APPEAL BRIEF UNDER 37 C.F.R. 41.37

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir or Madam:

The following is the Appellant's Brief, submitted under the provisions of 37 C.F.R. 41.37. The fee of $510 that is required by 37 C.F.R. 41.20(b)(2) is included with this submission.

Real Party in Interest

The real party in interest is the assignee of record, i.e. Nortel Networks Limited, current address 2351 Boulevard Alfred-Nobel, St. Laurent, Quebec, Canada, H4S 2A9.

Related Appeals and Interferences

There are no related appeals or interferences that will directly affect, be directly affected by or have a bearing on the present appeal.

Status of Claims

Claims 1 to 4, 7, 9 to 11 and 18 to 23 are currently pending in the application.

Claims 5, 6, 12 to 17 are withdrawn from consideration.

Claim 8 has been cancelled from the application.

The present appeal is directed to claims 1 to 4, 7, 9 to 11 and 18 to 23.

Status of Amendments

No amendments were proposed subsequent to the Final Office Action dated November 1, 2007.

Summary of Claimed Subject Matter

The invention is embodied in the two appealed independent claims, namely claims 1 and 22.

Claim 1 is directed to "A partner relay system for use in a communication system comprising a first transceiver and at least one second transceiver in which forward link transmissions occur in a downlink direction from the first transceiver to the at least one second transceiver and reverse link transmissions occur in an uplink direction from the at least one second transceiver to the first transceiver". Various embodiments of partner relays are illustrated in Figures 3, 4 and 5. With reference to Figure 3 in particular, the first transceiver is first partner relay 22 and the at least one second transceiver is second partner relay 24, as described on page 10, lines 12-14. Various embodiments of the implementation of forward and reverse link transmissions between the relays are described at page 11, lines 10 to 31, page 12, line 24 to page 13, line 17 and page 15, lines 1-16.

The partner relay system comprises "a first relay adapted to receive a first signal in the downlink direction on a first wireless transmission resource, perform a first signal translation on the first signal to a second transmission resource, and re-transmit the first signal in the downlink direction on the second wireless transmission resource." A first example of this is described at page 11, lines 16-21 with reference to Figure 3. A second example is described at page 12, line 32 to page 13, line 11 with reference to Figure 4. A third example is described at page 15, lines 5 to 9 with reference to Figure 5.

The partner relay system comprises "a second relay in a spaced arrangement from said first relay adapted to receive the first signal in the downlink direction on the second wireless transmission resource from the first relay, perform a second signal translation to re-translate the first signal to the first wireless transmission resource, and re-transmit the first signal in the downlink direction". A first example of this is described at page 11, lines 21-26 with reference to Figure 3. A second example is described at page 13, lines 11-13 reference to Figure 4. A third example is described at page 15, lines 9 to 12 with reference to Figure 5.

Claim 1 also recites "wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver". Based on this limitation and the earlier limitation of re-transmitting "the first signal in the downlink direction on the second wireless transmission resource", the claim as a whole recites that the second wireless transmission resource, which is allocated for reverse link transmissions to the first transceiver, is in fact being used for forward link transmissions to the second transceiver. An example of this is described with reference to Figure 5 on page 15, lines 6-10, which states "Relay 50 transmits on antenna 60 on the forward link, but using the normal reverse link frequency F1(RL)".

Claim 22 is directed to "A method of relaying a signal in a communication system comprising a first transceiver and at least one second transceiver in which forward link transmissions occur in a downlink direction from the first transceiver to the at least one

second transceiver and reverse link transmissions occur in an uplink direction from the at least one second transceiver to the first transceiver". Various embodiments of partner relays are illustrated in Figures 3, 4 and 5. With reference to Figure 3 in particular, the first transceiver is first partner relay 22 and the at least one second transceiver is second partner relay 24, as described on page 10, lines 12-14. Various embodiments of the implementation of forward and reverse link transmissions between the relays are described at page 11, lines 10 to 31, page 12, line 24 to page 13, line 17 and page 15, lines 1-16.

The method is recites a step of "receiving a first signal in the downlink direction on a first wireless transmission resource". An example of this is described at page 11, lines 16-18. Another example is described at page 15, lines 6 to 7 with reference to Figure 5.

The claim further recites a step that involves "performing a first signal translation on the first signal to a second transmission resource and re-transmitting the first signal on the second wireless transmission resource in the downlink direction". A first example of this is described at page 11, lines 19-21. A second example is described at page 12, line 32 to page 13, line 11. A third example is described at page 15, lines 7 to 9 with reference to Figure 5.

The claim further recites a step that involves "receiving the first signal in the downlink direction on the second wireless transmission resource". A first example of this is described at page 11, lines 21-22. A second example is described at page 13, lines 11-12. A third example is described at page 15, lines 9 to 10 with reference to Figure 5.

The claim further recites a step that involves "performing a second signal translation to re-translate the first signal to the first wireless transmission resource and re-transmitting the first signal in the downlink direction". A first example of this is described at page 11, lines 23-25. A second example is described at page 13, line 13. A third example is described at page 15, lines 10 to 12 with reference to Figure 5.

Claim 22 also recites "wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver." Based on this limitation and the earlier limitation of re-transmitting "the first signal in the downlink direction on the second wireless transmission resource", the claim as a whole recites that the second wireless transmission resource, which is allocated for reverse link transmissions to the first transceiver, is in fact being used for forward link transmissions to the second transceiver. An example of this is described with reference to Figure 5 on page 15, lines 6-10, which states "Relay 50 transmits on antenna 60 on the forward link, but using the normal reverse link frequency F1(RL)".

Grounds of Rejection to be Reviewed on Appeal

Claims 1 to 3, 7, 10, 11, 19 and 21 to 23 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,895,218 (Yarkosky).

Claim 4 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Yarkosky in view of U.S. Patent No. 6,985,716 (Talaie et al.).

Claims 9, 18 and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yarkosky in view of U.S. Patent No. 6,400,925 (Tirabassi et al.).

Argument

35 U.S.C 102 Claim Rejections

Controlling case law has frequently addressed rejections under 35 U.S.C. § 102. "For a prior art reference to anticipate in terms of 35 U.S.C. Section 102, **every element** of the claimed invention **must** be **identically** shown in a single reference." Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 677, 7 U.S.P.Q.2d 1315, 1317 (Fed. Cir. 1988; emphasis added). The disclosed elements must be arranged as in the claim under review. See Lindemann Machinefabrik v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984). If any claim, element, or step is

absent from the reference that is being relied upon, there is no anticipation. Kloster Speedsteel AB v. Crucible, Inc., 793 F.2d 1565, 230 U.S.P.Q. 81 (Fed. Cir. 1986; emphasis added). The following analysis of the present rejections is respectfully offered with guidance from the foregoing controlling case law decisions.

The Examiner has rejected claims 1 to 3, 7, 10, 11, 19 and 21 to 23 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,895,218 (Yarkosky).

Claim 1 of the present application recites the limitation that "the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver". Both of the first and second wireless transmission resources are being used for forward link transmissions. Specifically, the first relay is adapted to receive a first signal in the downlink direction on a first wireless transmission resource, perform a first signal translation on the first signal to a second transmission resource, and re-transmit the first signal in the downlink direction on the second wireless transmission resource". However, the second wireless transmission resource is recited to be "a transmission resource allocated for reverse link transmissions to the first transceiver". Therefore, the second wireless transmission resource, which is allocated for reverse link transmissions to the first transceiver, is in fact being used for forward link transmissions to the second transceiver.

The Examiner has alleged that Yarkosky discloses a second wireless transmission resource allocated for reverse link transmissions to the first transceiver. Yarkosky discloses reverse link transmissions (up link direction) on a transmission resource allocated for the reverse link transmission, but Yarkosky does suggest or disclose that the transmission resource allocated for reverse link transmissions is used to "re-transmit the first signal in the downlink direction on the second wireless transmission resource" (emphasis added). Therefore, Yarkosky does not disclose every limitation of claim 1.

Since Yarkosky does not disclose every limitation of claim 1, as required to establish an anticipation rejection, Applicant respectfully submits that the Examiner has erred in rejecting claim 1.

Independent claim 22 recites a limitation similar to that recited in amended claim 1. Claim 22 is not anticipated by Yarkosky for at least the same reasons discussed above with regard to claim 1.

Claims 2, 3, 7, 10, 11, 19 and 21 are dependent on claim 1, either directly or indirectly, and claim 23 is dependent on claim 22. These claims are allowable for at least the same reasons as independent claims 1 and 22.

Furthermore, with regard to claim 11, which recites "wherein the third wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver and the fourth wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver", Applicant submits this is similar but opposite to what is recited in claim 1. Therefore in the reverse link direction, the fourth wireless transmission resource is a resource normally allocated for the forward or down link direction, but is being used in the reverse direction. Just as Yarkosky does not disclose what is recited in claim 1, he likewise does not disclose what is recited in claim 11. Claim 23 recites similar subject matter to claim 11, and as such is allowable for the same reasons as claim 11.

Applicant respectfully submits that the Examiner's rejection of claims 1 to 3, 7, 10, 11, 13 to 15, 17, 19 and 21 to 23 is in error.

35 U.S.C 103 Claim Rejections

The Examiner has rejected claim 4 under 35 U.S.C. 103(a) as being unpatentable over Yarkosky in view of U.S. Patent No. 6,985,716 (Talaie et al.).

The law on obviousness under 35 U.S.C. 103 was recently addressed in ***KSR Int'l v. Teleflex, Inc.***, *No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007)*. Following this, examination guidelines were released by the USPTO on October 10, 2007 in regards to determining obviousness under 35 U.S.C. 103. According to these guidelines, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in ***Graham v. John Deere Co.*** *383 U.S. 1, 148 USPQ 459 (1966)*. Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by

the Court are as follows:

(1) Determining the scope and content of the prior art;

(2) Ascertaining the differences between the claimed invention and the prior art; and

(3) Resolving the level of ordinary skill in the pertinent art.

The Graham factors, including secondary considerations when present, are the controlling inquiries in any obviousness analysis. Once the findings of fact are articulated, Office personnel must provide an explanation to support an obviousness rejection under 35 U.S.C. 103. According to KSR, for the Patent Office to properly combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have sought to combine the respective teachings of the applied references.

Applicant's analysis below demonstrates that the Examiner has failed to properly conform to the aforementioned guidelines for a finding of obviousness under 35 U.S.C. 103.

Missing Elements

The following is a discussion of why the cited references do not disclose all the elements of the rejected claims. While it may be considered that "the mere existence of differences between prior art and an invention does not establish the invention's nonobviousness", Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one skilled in the art (Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR international Co.* v. *Teleflex Inc.*, published in Federal Register, Vol. 72, No. 195 October 10, 2007). As such, if elements from a claim are not disclosed by the combination of cited references and no valid reasoning is provided why the missing elements would be obvious, this provides a strong basis for why a claim should not be rejected based on obviousness.

Claim 4 is dependent upon amended claim 1. As discussed above, Yarkosky does not disclose all the limitations of claim 1. Applicant submits that Talaie et al. does not disclose the limitations missing from Yarkosky.

Applicant submits that there are differences between what is disclosed in the combination of Yarkosky and Talaie et al. and what is recited in claim 4 of the present application. In particular the combination of Yarkosky and Talaie et al. does not teach all the limitations of claim 1, upon which claim 4 depends. Furthermore, the Examiner has not provided a suitable reason why the missing limitations would be obvious to one skilled in the art. Therefore, Applicant submits that there are differences between the cited art and claim 4 of the present application that demonstrate that claim 4 of the present application patentably distinguishes over the combination of references.

Reason to Combine References

Once the scope of the prior art is ascertained, the content of the prior art must be properly combined. An obviousness inquiry requires review of a number of factors, including the background knowledge possessed by a person having ordinary skill in the art, to determine whether there was an apparent reason to combine the elements of the prior art in the fashion claimed by the present invention. For the Patent Office to combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have combined the references. Id. at 15. Even if the Patent Office is able to articulate and support a suggestion to combine the references, it is impermissible to pick and choose elements from the prior art while using the application as a template.

The Examiner has stated that the motivation in combining Yarkosky and Talaie et al. is "in order to increase capacity (Col. 3, lines 59-67)". Applicant submits that the particular portion of Talaie et al. being referred to by the Examiner is a statement made with reference to the invention of Talaie et al. Talaie et al. is disclosing that the "present invention significantly increases the capacity of broadcast radio communication systems by using one frequency channel per beam per broadcast" (emphasis added). Applicant submits that there is no indication the particular element that Talaie et al. is alleged to

disclose, namely that the first signal is a CDMA signal, is the reason that the present invention significantly increases the capacity of broadcast radio communication systems. Applicant submits that the mere suggestion of "increasing capacity", especially in the context that the expression is generally applied to the invention of Talaie et al., would not serve as sufficient reason to combine Yarkosky and Talaie et al. as there is no indication that a combination of Yarkosky and Talaie et al. would result in a system that has increased capacity, especially for the reason of using CDMA as a format of the first signal. Applicant respectfully submits that the Examiner's motivation for combining the references is inappropriate.

On the basis of the above, Applicant respectfully submits the Examiner has not provided a suitable reason why a person of ordinary skill in the art would have combined the cited references. As a result, the Examiner has erred in combining Yarkosky and Talaie et al. in rejecting claim 4 based on obviousness.

The Examiner has rejected claims 9, 18 and 20 under 35 U.S.C. 103(a) as being unpatentable over Yarkosky in view of U.S. Patent No. 6,400,925 (Tirabassi et al.).

Claims 9, 18 and 20 are dependent upon claim 1, either directly or indirectly. As discussed above, Yarkosky does not disclose all the limitations of claim 1. Applicant submits that Tirabassi et al. does not disclose the features missing from Yarkosky.

The Examiner has stated that the motivation in combining Yarkosky and Tirabassi et al. is "in order to meet performance requirements (Col. 2, lines 30-39)". Applicant submits that the particular portion of Tirabassi et al. being referred to by the Examiner is a statement made with reference to the prior art in the Background section of Tirabassi et al. Tirabassi et al. is suggesting that as compared to the prior art, which Tirabassi et al. is attempting to improve upon, "there is a need for a multiprocessor operating and application software structure for a packet switch in a communications satellite that efficiently meets the operational performance requirements of and provides a framework for more operational robustness, fault tolerance and reliability" (emphasis added). Applicant submits that there is no indication that a combination of Yarkosky and Tirabassi et al. would result in a system that has "a multiprocessor operating and

application software structure for a packet switch in a communications satellite that efficiently meets the operational performance requirements" and therefore, the Examiner's use of this expression, as motivation for combining the references is inappropriate, particularly in view of the subject matter being combined in Yarkosky and Tirabassi et al.

On the basis of the above, Applicant respectfully submits the Examiner has not provided a suitable reason why a person of ordinary skill in the art would have combined the cited references. As a result, the Examiner has erred in combining Yarkosky and Tirabassi et al. in rejecting claims 9, 18 and 20 based on obviousness.

Response to Arguments

At the bottom of page 6, the Examiner responds to Applicant's argument in the Office Action response submitted August 7, 2007, by alleging that "Yarkosky clearly teaches reverse link transmissions 18, 20 and 22 (Fig. 1)". While reference characters 18, 20 and 22 appear to disclose reverse link transmissions, as discussed above, Yarkosky does not recite receiving a first signal in the downlink direction on a first wireless transmission resource, performing a first signal translation on the first signal to a second transmission resource, and re-transmit the first signal in the downlink direction on the second wireless transmission resource wherein the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver.

At the middle of page 7, the Examiner responds to Applicant's argument in the Office Action response submitted August 7, 2007, by alleging that "The motivation was the motivation cited in Tirabassi. Both Tirabassi and Yarkosky teaches a communication system that uses repeaters to allow communication". As discussed in detail above in the Arguments section, Applicant submits that the motivation for combining the references is inappropriate, as there is no indication that the particular limitations in the claims that are allegedly taught by the respective references have any bearing on the result that Tirabassi et al. suggests is needed. Therefore, Applicant submits that the Examiner's response to the Applicant's Remarks is inappropriate, does not indicate a valid reason to combine the references, and as a result, the Examiner has not provided a suitable reason for combining Tirabassi et al. and Yarkosky.

For the foregoing reasons, it is submitted that all of the Examiner's rejections are erroneous, and reversal of each of his rejections is respectfully requested.

Respectfully submitted,

DAVID FALCONER ET AL.

By
Allan Brett
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Date: March 28, 2008

RAB:MSS:mcg

Claims Appendix:

1. (Previously Presented) A partner relay system for use in a communication system comprising a first transceiver and at least one second transceiver in which forward link transmissions occur in a downlink direction from the first transceiver to the at least one second transceiver and reverse link transmissions occur in an uplink direction from the at least one second transceiver to the first transceiver, the partner relay system comprising:

a first relay adapted to receive a first signal in the downlink direction on a first wireless transmission resource, perform a first signal translation on the first signal to a second transmission resource, and re-transmit the first signal in the downlink direction on the second wireless transmission resource;

a second relay in a spaced arrangement from said first relay adapted to receive the first signal in the downlink direction on the second wireless transmission resource from the first relay, perform a second signal translation to re-translate the first signal to the first wireless transmission resource, and re-transmit the first signal in the downlink direction;

wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver.

2. (Original) A partner relay system according to claim 1 wherein each signal translation is an analog translation.

3. (Original) A partner relay system according to claim 2 wherein each signal translation is a frequency translation.

4. (Original) A partner relay system according to claim 1 wherein the first signal is a CDMA signal.

5. (Withdrawn) A partner relay system according to claim 13 wherein the first wireless transmission resource comprises a first forward link channel on a first carrier

frequency, and the second wireless transmission resource comprises a second forward link channel on a second carrier frequency.

6. (Withdrawn) A partner relay system according to claim 13 wherein the first signal on the first wireless transmission resource comprises a CDMA signal on a first carrier frequency, and the first signal on the second wireless transmission resource comprises a CDMA signal on a second carrier frequency.

7. (Original) A cellular communication system for servicing a wireless station, the cellular communication system comprising a base station and the partner relay system of claim 1;

wherein the first signal is transmitted by the base station, and the second relay re-transmits the first signal for reception by the wireless station.

8. (Cancelled)

9. (Original) A partner relay system according to claim 1 wherein the first wireless transmission resource comprises a first combined TDM/FDM resource, and the second wireless transmission resource comprises a second combined TDM/FDM resource.

10. (Original) A partner relay system according to claim 1 for use in a cellular communications system providing service to a wireless station, wherein the first relay comprises a first antenna for communicating with the cellular communications system, and a second directional antenna for communicating with the second relay, and wherein the second relay comprises a third directional antenna for communicating with the first relay, and a fourth antenna for communicating with the wireless station.

11. (Previously Presented) A partner relay system according to claim 1 wherein:

the second relay is further adapted to receive a second signal in the uplink direction on a third wireless transmission resource, perform a third signal translation to translate the second signal to a fourth wireless transmission resource and re-transmit the second signal in the uplink direction;

the first relay is further adapted to receive the second signal in the uplink direction on the fourth wireless transmission resource from the second relay, perform a fourth signal translation to re-translate the second signal to the third wireless transmission resource, and re-transmit the second signal in the uplink direction;

wherein the third wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver and the fourth wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver.

12. (Withdrawn) A partner relay system according to claim 13, wherein forward link transmissions occur in a downlink direction from the first transceiver to one of the second and third transceivers and reverse link transmissions occur in an uplink direction from one of the second and third transceivers to the first transceiver; and

wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver to the second transceiver on a first carrier frequency, and the second wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver to the second transceiver on a second carrier frequency, and the third wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver from the second transceiver on the first carrier frequency, and the fourth wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver from the second transceiver on the second carrier frequency;

wherein a fifth wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver to the third transceiver between the first transceiver and the second relay on a first carrier frequency, a sixth wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver to the third transceiver between the second relay and the first relay on a second carrier frequency, a seventh wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver from

the third transceiver between the third transceiver and the first relay on the first carrier frequency, and an eighth wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver from the second transceiver between the first relay and the second relay on the second carrier frequency.

13. (Withdrawn) A partner relay system comprising:

a first relay adapted to receive a first signal on a first wireless transmission resource, perform a first signal translation on the first signal to a second transmission resource, and re-transmit the first signal on the second wireless transmission resource;

a second relay in a spaced arrangement from said first relay adapted to receive the first signal on the second wireless transmission resource from the first relay, perform a second signal translation to re-translate the first signal to the first wireless transmission resource, and re-transmit the first signal;

wherein:

the second relay is further adapted to receive a second signal on a third wireless transmission resource, perform a third signal translation to translate the second signal to a fourth wireless transmission resource and re-transmit the second signal;

the first relay is further adapted to receive the second signal on the fourth wireless transmission resource from the second relay, perform a fourth signal translation to re-translate the second signal to the third wireless transmission resource, and re-transmit the second signal;

for relaying signals between a first transceiver and a second transceiver and relaying signals between the first transceiver and a third transceiver;

wherein said first signal is from the first transceiver to the second transceiver and is relayed via the first relay and then the second relay, said second signal is from the second transceiver to the first transceiver is relayed via the second relay and then the first relay;

wherein a third signal from the first transceiver to the third transceiver is relayed via the second relay and then the first relay, and a fourth signal from the third transceiver to the first transceiver is relayed via the first relay and then the second relay;

wherein each signal transmitted between the first relay and the second relay is subject to signal translation prior to transmission by one of the relays and signal translation after reception by the other of the two relays.

14. (Withdrawn) A partner relay system according to claim 13 wherein said first and second signals are transmitted and relayed during first time slots, and said third and fourth signals are transmitted and relayed during second time slots.

15. (Withdrawn) A partner relay system according to claim 13 wherein the first wireless transmission resource is at least part of a first frequency band, the second wireless transmission resource is at least part of a second frequency band, the third wireless transmission resource is at least part of a third frequency band, and the fourth wireless transmission resource is at least part of a fourth frequency band.

16. (Withdrawn) A partner relay system according to claim 13 wherein each wireless transmission resource comprises at least one GSM channel.

17. (Withdrawn) A cellular communication system for servicing at least two wireless stations, the cellular communication system comprising a base station and the partner relay system of claim 13, wherein the first transceiver comprises the base station, and the second and third transceivers are wireless stations.

18. (Original) A partner relay system according to claim 11 wherein the first wireless transmission resource comprises a first combined TDM/FDM resource, and the second wireless transmission resource comprises a second combined TDM/FDM resource, the third wireless transmission resource comprises a third combined TDM/FDM resource, and the fourth wireless transmission resource comprises a fourth combined TDM/FDM resource.

19. (Original) A partner relay system according to claim 1 further comprising:

a third relay adapted to receive a second signal on a third wireless transmission resource, perform a third signal translation to translate the second signal to a fourth wireless transmission resource and re-transmit the second signal;

a fourth relay further adapted to receive the second signal on the fourth wireless transmission resource from the third relay, perform a fourth signal translation to re-translate the second signal to the third wireless transmission resource, and re-transmit the second signal.

20. (Original) A partner relay system according to claim 19 wherein the first wireless transmission resource comprises a first combined TDM/FDM resource, and the second wireless transmission resource comprises a second combined TDM/FDM resource, the third wireless transmission resource comprises a third combined TDM/FDM resource, and the fourth wireless transmission resource comprises a fourth combined TDM/FDM resource.

21. (Original) A partner relay system according to claim 1 further comprising:

a third relay adapted to receive a second signal on the second wireless transmission resource, perform a third signal translation to translate the second signal to the first wireless transmission resource and re-transmit the second signal;

a fourth relay adapted to receive the second signal on the first wireless transmission resource from the third relay, perform a fourth signal translation to re-translate the second signal to the second wireless transmission resource, and re-transmit the second signal.

22. (Previously Presented) A method of relaying a signal in a communication system comprising a first transceiver and at least one second transceiver in which forward link transmissions occur in a downlink direction from the first transceiver to the at least one second transceiver and reverse link transmissions occur in an uplink direction from the at least one second transceiver to the first transceiver, the method comprising:

receiving a first signal in the downlink direction on a first wireless transmission resource;

performing a first signal translation on the first signal to a second transmission resource and re-transmitting the first signal on the second wireless transmission resource in the downlink direction;

receiving the first signal in the downlink direction on the second wireless transmission resource;

performing a second signal translation to re-translate the first signal to the first wireless transmission resource and re-transmitting the first signal in the downlink direction;

wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver.

23. (Previously Presented) A method according to claim 22 further comprising:

receiving a second signal in the uplink direction on a third wireless transmission resource;

performing a third signal translation to translate the second signal to a fourth wireless transmission resource and re-transmitting the second signal in the uplink direction;

receiving the second signal in the uplink direction on the fourth wireless transmission resource;

performing a fourth signal translation to re-translate the second signal to the third wireless transmission resource and re-transmit the second signal in the uplink direction

wherein the third wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver and the fourth wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver.

Evidence Appendix:

None.

Related Proceedings Appendix

None.